

# Michigan Pediatric Tuberculosis Risk Assessment



Use this tool to identify & prioritize asymptomatic children for latent TB infection (LTBI) testing

Do not repeat testing unless there are new risk factors since the last test<sup>†</sup>

Do not treat for LTBI until active TB disease has been ruled out<sup>‡</sup>

Provider Name: \_\_\_\_\_

Assessment Date: \_\_\_\_\_

Patient Name: \_\_\_\_\_

DOB: \_\_\_\_\_

TB testing is recommended if any of the boxes below are checked

- ☐ **Birth, travel, or residence** in a country with an **elevated TB rate** for at least 1 month
- Includes any country other than the United States, Canada, Australia, New Zealand, or a country in western or northern Europe
  - Prioritize children with at least one medical risk for progression (see User Guide on page 2 for this list)
  - Interferon Gamma Release Assay (IGRA) is preferred over Tuberculin Skin Test (TST) for non-U.S.-born persons  $\geq 2$  years old

- ☐ **Immunosuppression**, current or planned
- HIV infection, organ transplant recipient, treated with TNF-alpha antagonist (e.g., infliximab, etanercept, others), steroids (equivalent of prednisone  $\geq 2$  mg/kg/day, or  $\geq 15$  mg/day for  $\geq 2$  weeks) or other immunosuppressive medication

- ☐ **Close contact** to someone with infectious TB disease during lifetime

Treat for LTBI if TB test result is positive and active TB disease is ruled out<sup>‡</sup>

- ☐ **None**; no TB testing is indicated at this time

TB test ordered?	Yes	No	
If YES, type?	TST	IGRA	
Test result	Neg	Pos	If TST, _____ mm
Medical evaluation / CXR recommended	Yes	No	

<sup>†</sup> If initial negative screening test occurred prior to 6 months of age, repeat testing should occur at  $\geq 6$  months.

<sup>‡</sup> For children with TB symptoms or abnormal CXR consistent with active TB disease, evaluate for active TB disease with a CXR, [symptom screen](#), and if indicated, sputum acid-fast bacilli (AFB) smears, cultures and nucleic acid amplification testing (NAAT).

## Avoid testing children at low risk

Routine testing of persons without risk factors is not recommended and may result in unnecessary evaluations and treatment because of false-positive test results.

## When to repeat a risk assessment and test

The risk assessment should be administered at least once. Children can be screened for new risk factors at subsequent preventive health visits. Re-testing should only be done in children who previously tested negative and have new risk factors since the last assessment (unless they were <6 months of age at the time of testing).

## Immunosuppression

The exact level of immunosuppression that predisposes increased risk for TB progression is unknown. The threshold of steroid dose and duration used in this risk assessment are based on data in adults and in accordance with ACIP recommendations for live vaccines in children receiving immunosuppression.

## Mandated testing

Certain populations may be mandated for testing by statute, regulation, or policy (e.g., students, members of child home centers, etc.) This risk assessment was created to focus testing on children at highest risk and does not supersede mandated testing. Please refer to the [Michigan Department of Licensing and Regulatory Affairs](#) (LARA) for more information about TB screening regulation in Michigan.

Testing should also be considered in children with frequent exposure to adults at high risk of TB infection, such as those with extensive foreign travel in areas with high TB rates.

## IGRA preference in non-US-born children ≥2 years

Because IGRA has increased specificity for TB infection in children vaccinated with BCG, IGRA is preferred over the TST for non-US-born children ≥2 years of age. In BCG vaccinated immunocompetent children with a positive TST, it may be appropriate to confirm a positive TST with an IGRA.

## Foreign travel or residence

Travel or residence in countries with an elevated TB rate may be a risk for TB exposure in certain circumstances (e.g., extended duration, likely contact with persons with infectious TB, high prevalence of TB in travel location, non-tourist travel). The duration of at least 1 consecutive month to trigger testing is intended to identify travel most likely to involve TB exposure. TB screening tests can be falsely negative within the 8 weeks after exposure, so are best obtained 8 weeks after a child's return.

## A negative TB test does not rule out active TB disease

A negative TST or IGRA result does not rule out active TB disease. A negative TST or IGRA in a child with active TB disease can be a sign of extensive disease.

## Evaluation for active TB disease

Children with any of the following symptoms that are otherwise unexplained should be evaluated for active TB disease: cough for more than 2-3 weeks, fevers, night sweats, weight loss and hemoptysis. Evaluate for active TB disease with a CXR, symptom screen and if indicated, sputum AFB smears, cultures and NAAT.

## LTBI treatment

Children with LTBI and risk factors for progression to active TB disease should be treated for LTBI, once active TB disease has been ruled out.

Shorter regimens for treating latent TB infection have been shown to be as effective as 9 months of isoniazid and are more likely to be completed. Use of these shorter regimens is preferred in most patients, although the 12-week regimen is not recommended for children <2 years of age or children on antiretroviral medications. Drug-drug interactions and contact to drug resistant TB are other contraindications for shorter regimens.

## CDC Recommended LTBI treatment regimens

Medication	Frequency	Duration	Doses
Isoniazid & Rifapentine	Weekly	12 weeks	12*
Rifampin	Daily	4 months	120
Isoniazid	Daily or 2x weekly	9 months	76-270

*\*11-12 doses in 16 weeks required for completion*

## Refusal of recommended LTBI treatment

Refusal should be documented. Recommendations for treatment should be made at future encounters with medical services. If treatment is later accepted, TB disease should be excluded, and chest x-ray repeated if it has been more than 6 months from the initial evaluation for children  $\geq 5$  years and 3 months for children <5 years of age.

## Resources & References

- Treatment regimens for LTBI available on the CDC LTBI Resources website (<https://www.cdc.gov/tb/publications/lbti/lbiresources.htm>)
- American Academy of Pediatrics, Red Book Online, Tuberculosis is available on the Red Book Online website (<https://redbook.solutions.aap.org/book.aspx?bookid=2205>)
- This pamphlet was adapted from the California Pediatric Tuberculosis Risk Assessment and User Guide, created by the California TB Controllers Association, the California Department of Public Health, and the Curry International Tuberculosis Center (<https://www.cdph.ca.gov/Programs/CID/DCDC/CDPH%20Document%20Library/TBCB-CA-Pediatric-TB-Risk-Assessment.pdf>)

## Abbreviations

ACIP, Advisory Committee on Immunization Practices; AFB, acid-fast bacilli; BCG, Bacillus Calmette-Guérin; CXR, chest x-ray; IGRA, interferon gamma release assay; LARA, Licensing and Regulatory Affairs; LTBI, latent TB infection; NAAT, nucleic acid amplification testing; TST, tuberculin skin test



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